Course Prefix and Number: WEL 164  Credits: 3

Course Title: Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG)

Course Description: Introduces practical operations in the use of tungsten arc welding and equipment. Studies equipment operation setup, safety, and practice of Gas Tungsten Arc Welding (GTAW), Tungsten Inert Gas (TIG). Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week.

General Course Purpose: To assist students in developing job skills needed to enter the work force in the welding occupation and as a means to help students acquire the skills necessary to find employment as a TIG welder.

Student Learning Outcomes:
Upon completing the course, the student will be able to
a. Recognize and use proper safety procedures while welding;
 b. Demonstrate the ability to perform correct equipment setup;
 c. Demonstrate the ability to use TIG welding equipment; and
 d. Demonstrate the ability to complete TIG welds successfully.

Major Topics to Be Included:
 a. Safety
 b. GTAW process
 c. Equipment set up
 d. Selection of filler materials and gasses
 e. Selection of TIG electrodes and consumables
 f. Weld preparation
 g. TIG welds in the various positions
 h. Techniques for welding aluminum, carbon steel, and stainless steel

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